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**LAND MINE OPTIONS IN FUTURE
CRISIS AND CONFLICTS**

BY

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LAND MINE OPTIONS IN FUTURE
CRISIS AND CONFLICTS

Individual Essay Project

by

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LAND MINE OPTIONS IN FUTURE CRISIS AND CONFLICTS

It may seem incredible to reflect that a battle, a campaign or even a war could, at any time, have been vitally affected by means other than those involving a clash of arms, the discharge of artillery, a barrage of bombs or a blast of atomic energy. Yet such is the case, for there does exist a type of weapon which has determined the success or failure of military conflict in other and mysterious ways. An agent which has frequently been unsuspected, was usually invisible and in most cases was without detection...and this is the sea mine. (Taken from The Approaches are Mined! By CPT K. Langmaid, Royal Navy)¹

If the sea mine with its associated methods of employment can shape the outcome of war, it would seem that the land mine can do the same thing. However, to the best of this author's knowledge no such claims have ever been made regarding land mine use.

The fact is that this very cost-effective weapon (the land mine) can disable a soldier rendering him ineffective as a fighting machine while lowering the morale of his comrades and slowing down others to treat his wounds. In like manner they can destroy a tank costing hundreds or thousands of times as much as the mine itself. The confusion caused by mine attacks on armored units also renders them more vulnerable to other weapons. Mine programs do, however, habitually suffer from a lack of money - not least because they are unglamorous and cannot be paraded past a saluting post or base.² The point is that this potent device, the land mine, merits consideration for use across the entire spectrum of strategy, operational art and tactics.

Even though funds have been short for mine programs many of the industrialized countries and especially the United States have been developing a new generation of land mine obstacles and barrier systems. This paper examines the potential impact of using these land mine systems across the range of military, political and socio-psychological options available to American decision makers in future crisis and conflicts. Strategic, operational and tactical uses are considered. The basic thesis is that use of new land mine systems can diversify American options and create moves for which retaliation by the enemy, though effective, would hurt his broader operational position.

If we claim that our current national military strategy consists of the five planks listed below:³

- global deterrence of war
- global warfighting capability (to win)
- combating terrorism
- raising the nuclear threshold
- low intensity conflict emphasis

then the question that naturally follows is - How can land mines contribute to strategic goals?

Let us begin our examination by considering war deterrence around the globe and use the central region (Southwest Asia) to illustrate what might be achieved. Suppose that the six-year Iranian-Iraqi War has been culminated by an Iranian "grand offensive" that breaks through Iraqi defenses in the Basrah-Majnoon region causing the Iraqi forces to withdraw in great disorder into the interior of their country. Taking advantage of this

success, Iranian forces then drive southward into Kuwait. Kuwait City falls and Kuwaiti petroleum installations are captured. Despite actions by governments of the United States, Western Europe and others in denouncing the open aggression between Iran and the Gulf States, calling for immediate Iranian withdrawal and border restoration, the Iranian government fails to respond. In fact, Iran appears to be consolidating forces in preparation for continuing the attack into the eastern province of Saudi Arabia. USCENTCOM is alerted, Saudi Arabia goes to full mobilization and requests United States and other friendly nations assistance.⁴

Although the painting of this short scenario may be somewhat conjectural, it adequately sets the stage for the use of land mine systems in preventing the expansion of a regional war. The fundamental problem here is that it would take a significant amount of time to bring combined arms U.S. forces to bear in the region and that the Saudi defense forces would have considerable difficulty in preventing incursion by wartested Iranian elements. So how do land mines play?

The tactic here would be to place a land mine barrier between the parties to separate them during pre-conflict maneuvering or just prior to the outset of actual conflict. Quick placement could be accomplished through the following means. Saudi and U.S. Air Force platforms delivering the GATOR mine system. Saudi artillery batteries delivering RAM and ADAM systems. Saudi and U.S. forces delivering obstacles with both the GEMSS and VOLCANO systems. A variant here could even involve placement by a proxy,

itself supplied with both the necessary mines and delivery vehicles by the United States.

Such use of land mine barrier systems might serve to prevent war for a couple of reasons. On one hand, in those cases where reciprocal fears of surprise attack, mobilization pressures, and crisis momentum are operating, rapid placement would reduce the advantages of attacking first, allow for mutual demobilization, and break that momentum.

Secondly, even where one or the other side might have decided to go to war, quick placement could serve to prevent it. That is, it could increase sufficiently the risks of war so that the side in question may reconsider. In our example, Iran's reconsideration would be based on both an assessment of the impact upon the battle outcome of having to begin by crossing the land mine barrier and its perception of the likelihood of massive intervention by U.S. forces. Thus, in the hypothetical case of an Iranian attack for the conquest of Saudi Arabia, rapid deployment of mine systems would complicate Iranian calculations, while causing Iran to reflect on the likelihood of more direct American counteraction. Though somewhat hypothetical, this possible use of land mine systems to separate physically the parties in a crisis or potential conflict would appear to warrant more detailed attention and evaluation by military and political leaders alike.⁵

Another illustration for the strategic use of land mine barrier systems exists in northeast Asia and more specifically on the Korean peninsula. There are several reasons to believe that

the entire potential family of scatterable mines would be a useful addition to South Korea's defense posture. In this case a number of advantages could accrue from rapidly placing such systems by ground, air and artillery means if attack from the north becomes imminent. With such a system employed at and along the DMZ, coupled with ensuring that the international community becomes aware that this has been accomplished - a tripwire has been set. Penetration of the mine system by North Korean elements would make it very clear to the world who had started the war. Given current American reluctance to become involved in another military conflict, it may be especially useful to demonstrate that North Korea had attacked first. Additionally, it could be argued that the North Koreans, given one last chance, had gone to war anyway.

Why can this be said? Deployments of mine systems, especially by the United States, signal to the enemy that this is the last clear chance to avoid a clash of arms. This follows from the passive and entirely defensive character of land mine systems. That is, that South Korea did not begin to kill North Koreans, but only created a system in which North Koreans could be killed. By placing the burden of jumping up the escalation ladder squarely on the North Koreans, the South Koreans and the U.S. would gain an important bargaining asymmetry.

Next, by deployment of these land mine systems South Korea would be able to demonstrate its resolve by taking a militarily significant step. If the effort of emplacement was a combined U.S. and ROK move it could have an even greater deterrent value.

The really elegant component of this action is that defense and war deterrence is enhanced without directly attacking North Korean personnel and/or equipment. We can also conjecture that it is not unreasonable that both the North Koreans and South Koreans would both desire to avoid a direct clash of arms. By rapidly emplacing that barrier system, even though it could be eventually penetrated, the South Koreans and the United States might provide a useful face-saving device for North Korean inaction and that is probably vital in the region we are addressing.

Another point regarding provision of land mine systems as a means for shoring up conventional defenses in friendly, rapidly advancing countries such as South Korea should probably be made. The alternative to an adequate and affordable conventional defense is likely to be the development of a nuclear weapon capability. By assuring the ability of countries such as South Korea, a candidate nuclear weapon state in the future, to deter the threat to their security with conventional weapons, the United States would reduce the likelihood that such a country would go nuclear.⁶ And, for well-known reasons which we need not enumerate here, retarding nuclear weapon proliferation has been and must continue to be one of the objectives of U.S. policy. This also speaks for raising the nuclear threshold between U.S. and the Soviet Union as regards sponsorship support to competing nations.

To wind up our discussion regarding strategic and operational uses of land mine systems in regional conflicts between

lesser powers one more mini-thesis is worth examining. In most regions of the world our military support to both friendly and some not-so-friendly nations has centered on provisioning them with weapons systems that have a significant offensive potential. The mini-thesis here is that this action alone may serve us negatively in particular regions by increasing the tension among member states.

If we look briefly at the Arab-Israeli problem, we can bring into focus the danger of providing the wrong kind of defense systems. American Middle East policy is both committed to Israel's defense, and attempting to maintain and improve links with Arab states. In this context, supplying Israel with a mix of land mine systems and other conventional weapons might have fewer negative repercussions among the Arab states than would simply supplying advanced essentially offensive, conventional arms. That is, from the Arab point of view these systems, in contrast to high performance aircraft, Lance missiles, and precision-guided munitions, might appear less threatening. In turn, were the provision of such systems to be regarded as less threatening by the Arab states, the impact of supplies upon the Middle East arms race could be partly moderated. Here, the political implications of the passive aspect of land mine systems stand out. Mines are only a threat to you if you enter the system on your own accord.

If we can make the claim that Western Europe will remain the major prize in the controlled competition between the United States and the Soviet Union it will continue to be a likely arena

for Soviet-American crisis and potential follow-on conflict. A capability for rapid deployment of sophisticated land mine barrier systems might be an important element of successful crisis management and termination of potential follow-on conflict (on terms favorable to the United States and NATO).

The United States' crisis resolve in Europe will depend on the initial availability of a conventional war-fighting option. By reinforcing that option in an intense crisis, deployment of barrier systems would reduce the likelihood of American self-deterrence.⁷

There have been many articles written recently regarding reinforcement of the conventional option for the defense of Western Europe. Peter Weber, in the February issue of Army magazine argues that doctrinal bias and political wishful thinking have combined to deny NATO ground forces the advantage of prepared fortifications. He makes the claim that prepared fortifications are an economy of force measures that could strengthen deterrence and provide a critical edge in the early hours of an invasion of Western Europe. He further postulates that of all the arguments pointing to fortifications as effective defenses in time of war, the most important would be their implications for peace, as a reasonable and safe deterrent.⁸

Like Peter Weber, I am all for using every kind of means that enhance our conventional ability to deter war through peacetime preparation. Preparing positions in advance represents a need that is there - no doubt. The fundamental strength here for the defense is the product of a force sitting tight on the ground

of a commanders own choosing. Even Richard Simpkin, in his book Antitank, makes the claim that a forward obstacle belt should be in position in peacetime to: safeguard against surprise attack; act in the role of a psychological and military trip wire; and that even though it can be penetrated it reduces the momentum of enemy attack, canalizes him, and with luck will create vulnerable traffic buildups which can be attacked.⁹

There are, however, planks against this type of preparation. First, it is very costly in terms of money and impact on the environment. I'm not sure that given these considerations that such an initiative would sell either in Peoria or Bamberg. Another cost is that once you place it (dragons teeth, bunkers, tank ditches, etc.) they cannot be moved and used in another region of the world.

Obstacle and fortification preparation conducted in peacetime also do little for security of information regarding how you will fight. Positions and plans are disclosed and the attacker can avoid main positions or time and measure his punches to suit. Additionally, the defending commander is shackled by his own preparations: he commits himself to that piece or pieces of real estate and by doing so limits freedom of action and flexibility.

The root problem is in fact one of tempo. Time and the dollar cost to prepare is not compatible with the political climates in the United States and the Federal Republic of Germany. Nor are fixed non-dynamic barriers compatible with the modern mechanized battlefield.

Another subset of the barrier problem is really twofold. To be effective at all, any fortification system must include mines, and the placement of these in non-crisis peacetime (in the depth required) has a negative safety aspect to it that could not be tolerated by the German populace. Second, even if there is sufficient warning given to NATO (the 10 days or so expected) placement of obstacle systems will probably be delayed by political leader searches for other crisis solutions which will in turn not allow for placement of massive deliberately-laid minefields for linking and adding depth to natural obstacles.

The solution here to buttressing NATO's conventional defense is not peacetime construction and maintenance of a Maginot Line, but having available a rapidly deployable land mine barrier system. That is, one available in sufficient quantities that can be delivered by: rotary and fixed wing air platforms; tube and rocket artillery; and by ground-tracked and wheeled vehicle means. These systems, as they exist today in our family of scatterable mines, are no inhibitor of friendly maneuver as they can be sterilized in accordance with time settings or by command destruct mechanisms. So we ask, how could this really help?

First, if we assume that a probable start to future NATO-Warsaw Pact conflict would begin with the spilling-over of one or the other sides military forces, the availability of rapidly deployable barrier systems might increase the likelihood of early conflict termination before it escalated to a Soviet-American nuclear exchange. For example, Soviet ground forces attempting to reinforce their control in Czechoslovakia and the

Czech Army decides to resist - causing spillover of the fight into the Federal Republic of Germany.

In such a spill-over conflict political decision makers and higher level military commanders on both sides of the border are likely to be strongly motivated to terminate the conflict without further escalation. However, efforts to do so could be seriously hindered by breakdowns of command and control. Moreover, as the conflict spreads geographically and in duration, pressures to escalate in order to take advantage of any NATO disorganization and to preempt any escalation might grow. Additionally, with the conflict going well for the Soviet Union, pressures to continue it and then call for negotiations might erode any previously held desire for rapid termination.

An American land mine barrier system capability (of the kind noted previously) might contribute in several ways to terminating such a spill-over conflict. By rapidly and selectively deploying barrier systems, it could be possible to contain temporarily the limited spillover of Soviet forces. Such containment, even if for 24 to 48 hours, would provide both a psychological and a physical pause to the conflict. Psychologically, the momentum of the conflict would have been disrupted, perhaps leading both sides to seek a way out. More importantly, the physical pause, resulting from containment of the Soviet forces westward flow, would provide needed time in which both sides could assess the situation, reach agreement at home, open negotiations, and, if required re-establish command and control links. By resorting to such a land mine containment operation at the outset of a

spill-over conflict, it might be possible to create a pause and to terminate the conflict before the momentum of battle had led to irreversible Soviet territorial advances.

It is at this point where we need to consider another plank in favor of the use of rapidly emplaced mine barrier systems. With the all-out surprise of the Yom Kippur War still fresh in the minds of Soviet planners, a similar European theater adapted scenario may be an attractive proposition. From the Soviet standpoint, even more impressive dividends could be reaped from a repeat performance in Central Europe. What may be important here is the Soviet planners' realization that they have the best possible chance to beat NATO using the already battle-proven concept; although the Arabs failed in the Yom Kippur War to achieve an overwhelming military victory, the Egyptians nevertheless attained a political advantage far beyond their expectations.¹⁰

Aware of their own shortcomings against a fully deployed NATO front, the Soviets must put their faith in surprise, speed, maintained momentum and initiative. Launching their forces on simultaneous multi-axis attacks, combining strong firepower at the tactical level with operational mobility in three-dimensional activities over the whole front while saturating the strategic zone with other means, the Soviets could gain most of their objectives before NATO can rally its forces to their preassigned deployment zones. If the Soviets do their homework well, choosing the right moment for the initial strike, NATO commanders will be left with hours, not days, to assess the oncoming threat

before it materializes and Soviet tanks actually start rolling over the inter-German/Czech border.

At this stage any decision to start forward movements, some greater than 18 hours time from GDP positions, may prove too late. But too late if and only if we lack the capability to rapidly deploy massive mine barrier systems with tridimensional means.

Rapid deployment of scatterable mine systems, if available in sufficient quantities, could be accomplished in great depth along major avenues of approach and to a lesser degree on others (fixed and rotary wing aircraft can get this operation going fast). Once done, artillery and some ground emplacing systems can contribute early also. This initial action thwarts somewhat the Soviet advantage of surprise and would complicate their military calculations. Additionally, it may even be possible here, while NATO maneuver elements, are moving forward, to emplace mine obstacles faster than the enemy can breach them, breaking their reliance on speed and halting their momentum. Further delivery right on the Soviet forces using air and missile artillery means give what we might call the "instant" mine effect

- place them where the opposition has to go because he is already there

- and when it is too late to avoid them.

"Instant" mining turns the old cliché inside out. It is no longer a question of obstacles being covered by fire, but of "instant" minefields being used to support the direct fire anti-armor defense...even before the direct fire means get there.¹¹

As a further option, and concurrent with the activity listed above, communicating to Soviet leaders in Moscow a declaratory policy to regard the land mine barrier systems as a channelizing device for near-term use of tactical nuclear weapons - representing movement up the escalation ladder. Furthermore, rapid deployment of land mine systems could be a less destabilizing means of demonstrating resolve before border crossings are made due to their passive destruction aspects. As we have noted before, you must enter the field before the killing begins.

It is useful at this point in our discussion, by way of summary, to provide a shorthand recapitulation of what has been covered thus far in the application of rapidly deployable land mine systems for use in strategic and operational options.

<u>OPTION</u>	<u>EXPECTED RESULT</u>
- Use for pre-conflict force separation where attack by one of the parties involved seems imminent	- Forced pause in crisis momentum; deter regional war
- Use as a "tripwire"	- Fixes who started the war; may generate future bargaining options; psychological deterrent
- Use as a signaling device/taking a militarily significant step for making clear a nation's resolve regarding any escalation from crisis to conflict	- Cause enemy to re-think or recompute military calculations; delays action which can in turn create the pause required to open/re-open negotiations.

<u>OPTION</u>	<u>EXPECTED RESULT</u>
- Use as a conventional defense enhancement, for "nuclear candidate" nations, giving them a weapon system that will negate reasons for developing other than conventional means for defense	- Reduction of nuclear weapon proliferation and raising of the nuclear threshold
- Use in providing the enemy with a "save face" option for going back to political leadership and claiming that a rapid operational adjustment of the battlefield by the opposing force will not allow attack now	- Deter conflict; places ball squarely back in political/diplomatic court
- Use as a <u>genuine</u> defensive system which can be provided to a supported state in lieu of providing systems which have threatening offensive characteristics	- Provides for better relations between America and nations within a region that are belligerents among themselves but not against the U.S.; reduces cause for fear of attack and can reduce Soviet encroachment into voids created by the U.S. in providing unbalanced military assistance.
- Cannot/should not build Maginot Line type fortifications in peacetime even though they may make sense; Use rapidly deployable land mine barriers which allow provision of a defensive system where it is needed - when it is needed (sterilization capability considered)	- Adds another dimension to conventional defense; due to rapid placement capability gives a quick add of another rung on the escalation ladder; deters conflict

OPTION

- Use in building obstacles faster than they can be breached by the enemy

EXPECTED RESULT

- If forces are the enemy's center of gravity or source of strength, you reduce his capacity in applying power to secure strategic objectives; cause him to change ways and means, you become the agenda setter - in the position to win.

This abbreviated discussion review demonstrates that land mines have significant utility in: deterring conflict/war; raising the nuclear threshold; and creating multiplicative conventional capacity to fight and win. Additionally, these systems and their application constitute an addition to the list of means and ways in which some of our national strategic objectives can be attained.

Only one point remains for discussion. If the claim that rapidly deployable land mine systems have significant strategic application, then some competitive strategic analysis is demanded. Consider the chart shown below which breaks out the components of a competitor analysis.

WHAT DRIVES
THE ENEMY

WHAT THE ENEMY IS
DOING AND CAN DO

ENEMY'S RESPONSE PROFILE

- satisfied with current position
- what likely moves will he make
- where is he vulnerable
- what will provide the greatest and most effective retaliation by the enemy

ENEMY'S ASSUMPTIONS
HELD ABOUT ITSELF
AND WAR FIGHTING

CAPABILITIES,
BOTH STRENGTHS
AND WEAKNESSES

Using the chart provided, we can begin assessment regarding the worth of applying rapidly deployable land mine system means and ways of application to theater strategic objectives which of course must then contribute to global military and national strategic goals. We will consider each of the corner questions on the model, establish the enemy's response profile, and conclude with an answer to our question - can rapidly deployable land mine barrier systems contribute to strategic goals.

What drives the enemy? At first blush the answer must be ideology and basic philosophy. The enemy's ideology has its base in Marxist-Leninist theory, a part of which argues that not until socialism prevails in every land will wars disappear from the earth. If we borrow a bit from a recent issue of Parameters, Journal of the US Army War College, more light is shed on the enemy's drive.

Socialists, without ceasing to be Socialists, cannot oppose any kind of war....Socialists never have and never could oppose revolutionary wars...[and] he who accepted the class struggle cannot fail to recognize civil wars which under any class society represent the natural, and under certain conditions, inevitable continuation of the development and aggravation of the class struggle...[further] socialism cannot win simultaneously in all countries. It will win initially in one or several countries, while the remainder will remain for some time, either bourgeois or pre-bourgeois. This should result not only in frictions, but also in direct striving of the bourgeois of other countries to smash the victorious proletariat of the socialist state. In such cases, a war on our part would be lawful and just.¹²

What is gathered here is that conflict or war is normalized and with it an attendant obligation exists for allocation of intellectual and material resources to its management development, and execution.

What is the enemy doing and what can he do? The Soviets have built and are continuing to build, an enormous military capability at great cost to their society. This capability far exceeds that which is needed for self-defense. They maintain elaborate plans and preparations for large-scale Soviet invasions far beyond their borders and modernize continuously and constantly. The policy of promoting communist revolution throughout the world continues to be followed. Soviet surrogates promoting revolution and unrest have been and are operating with vigor in the Caribbean, Central America, the Middle East, etc. They have shown and continue to show their willingness and capability to use military force to invade and coerce other countries. Intimidation of Poland and the invasion of Afghanistan are recent examples. At the bottom line they are following their ideology and philosophy in ways that will continue to be manifested by crisis and conflict around the world.

What are the enemy's assumptions held about itself and war fighting? The best short answer to this question comes from Major General E. B. Atkeson (USA Ret.)

Clearly the Soviets have a different perception of the proximity of threats to their territorial security than does the United States. For the Soviets, the principal protagonist may be situated on the opposite side of the globe on the North American continent, but that does not define the full extent of their "strategic" concerns. They perceive a ring of states on or near their borders which have at one time or another posed serious security threats to the homeland, and could again at some time in the future. These threats are every bit as "strategic" in the Soviet mind as any posed from the Western Hemisphere.¹³

As regards war fighting, the close integration of military and party leadership permits rapid shifting from political to military emphasis. Here, in this environment strategy feeds doctrine and policy sets the tasks for military strategy. Soviet military doctrine as it relates here is exclusively offensive in nature.

What are the enemy's capabilities, both strengths and weaknesses? They are extremely adept at analyzing total-system strengths of both their own and opponents present and projected force postures for systemic strengths and vulnerabilities. Development of their force is under-girded by supporting a systemic response that exploits an opponent's weaknesses and their own strengths. The primary system response is almost always a combination of different kinds of relatively inferior weapons used in an operational strategy that exploits Soviet system advantages. On the negative side Soviet planners have had occasion to erroneously see and build against a total system design in US weapons development and operations when no US total system

concept or strategy exists. This often leads to unnecessary and misplaced investment. There is a real asymmetry here between the U.S. and the U.S.S.R. in that the U.S. optimizes subsystems and the Soviets' optimize the total system. It is clear then, how the Soviets can easily misread what is going on on our side of the globe.¹⁴

Given these four previously discussed inputs to the enemy's response profile, we are now prepared to develop that profile against the utility of using rapidly deployable land mine systems in the ways described on pages 14 through 15 of this paper.

ENEMY'S RESPONSE PROFILE

- WILL HE BE SATISFIED WITH HIS CURRENT POSITION?

The Soviets cannot be satisfied with their current position given ideological factors. War, conflict and crisis will not cease until socialism prevails in all states of the globe. Therefore, invasion, coercion, and use of surrogates to project power must continue. Mere development and use of massive rapidly deployable land mine systems will have no impact on this element of the profile. Only ways and means to achieve their objectives will be altered.

- WHAT LIKELY MOVES WILL HE MAKE?

It is in this element of the profile where the Soviets will make a response of a significant nature. Given their bent for responding with a total system approach we may have to do a little prospecting before we can determine what it may be. If we start at the tactical level, move to the operational level, and finish with anticipated moves at the strategic level we may find a rational system response.

-- TACTICAL RESPONSES

- mounting more mine rollers and
mine plows on tanks
- increasing the ratio of engineers
to maneuver elements
- smoke enhancement for better obscuration
- development of effective surface launched
fuel air explosives to breach by overpressure
- more line charges for breaching by explosive means
- enhancing their armor; especially tank bellies
- more dismounted infantry to not only secure but
to reduce mine obstacles
- more reconnaissance units to look for bypass
and weak points

- development of better means to attack mine delivery platforms
- more air defense artillery to guard anticipated unit bunching on encountering mine barriers
- more emphasis on own suppression means (TAC AIR & ARTY)
- relooking at the tactical nuclear weapon as a means for breach of rapidly deployed mine barriers
- OPERATIONAL RESPONSES
 - close up 2d echelon elements to assist in a massive bull-your-way-through technique
 - higher priority to destruction of air delivery platforms and their bases
 - again more reconnaissance means
 - Spetsnaz target changes
 - use broad front single echelon attack to find weak point and count on 1st echelon breakthrough
 - more emphasis on deception as it relates to axis of main thrust
 - look for increased suppression means
 - use more airborne and more air assault formations to secure elements involved in reducing the mine barriers

- plans must achieve more surprise in order to dampen effect of rapidly employing mine barriers; a few hours begin to make a real difference in the ability to achieve breakthrough

- tac nuclear options for obstacle reduction again appear

-- STRATEGIC RESPONSES

- repeated large scale maneuvers and troop movements implemented within well-planned deception programs to cause NATO to mobilize and then as the threat subsides to demobilize - highly effective for probing NATO's mobilization capability; causing large NATO resource expenditures; impact on morale
- increased naval and air interdiction capability
- enhance significantly her amphibious force to bypass massive obstacles by making forced over-the-shore entries.

Although open to some debate, it would appear likely that the Soviets would choose a system response on the tactical level of increasing breaching means; on the operational level choosing to use more forces on a broad front attack to seek and exploit weakness; and at the strategic level attempt to use large exercises, frequently accomplished, to achieve essentially what the forces of Egypt accomplished in the way of surprise against Israel in 1973.

- WHERE IS HE VULNERABLE?

Continuing with the development of the enemy's response profile our next question - Where is he vulnerable? By revisiting the perceptions the Soviets have regarding the proximity of the threat to their territorial security it is useful to recall that states near their border, such as East Germany, remain as threats in the Soviet mind. If we stretch the point a bit a fair number of the Warsaw Pact states could fall into this category. Therefore we can postulate that the Soviets will take no action inside these states that would increase, in their minds, the present level of perceived threat. It follows then that if they significantly increase forward deployed troop strength in these states and begin the conduct of large exercises as a part of their response to our capability to rapidly deploy mine barriers the population backlash may create more problems than they were trying to solve. This takes them right back to the list of probable responses to look for other means, most of which are more expensive than those we postulated. This impacts on their offensive orientation and ability to set the agenda.

- WHAT WILL PROVIDE THE GREATEST AND MOST EFFECTIVE RETALIATION BY THE ENEMY?

Here, we must go back to our list of tactical, operational and strategic system responses (pages 21-23). Once again claiming that the Soviets will attempt to find a total system response to the problem, they must consider the ways in which massive rapidly placed mine barriers can be overcome. There are basically three ways to accomplish this:

1. Bypass the barrier by going over it with air means or go around it using a combination of means (air, ground and sea);
2. Breach the obstacle system itself;
3. Insure that the obstacle itself is never placed.

If the choice is bypass, a number of actions can be taken. Using air means, airborne and air assault, to get over it would quickly become a very expensive way to achieve the objective. The building of more air delivery platforms would be required and I'm not sure that they really want to pay the price for these means that are so easily detected by intelligence assets when they are staged for use. Going around the barrier system would almost require forced amphibious entry by navy and marine assets. Here, we are looking again at a very expensive system to develop and implement. In this case they not only have a monetary problem before this capability could be brought to bear, but also one of time. Both methods would be effective ultimately, but seem cost prohibitive in the short run.

If they choose to breach the system itself, this can be accomplished through either nuclear or conventional means. If the choice is nuclear breach, then they must pass soldiers and equipment through contaminated areas which will require each one of them to be a hell of a patriot. Also, once this means is used, they will certainly see a nuclear response by the West. I'm not sure they want to climb the escalatory ladder early on in any conflict. So, maybe the choice must be conventional for

breaching the system. Both the United States and the Soviets have been working on this for some time, but with little success. If we couple this lack of success with out previous claim that we can build obstacles faster than they can be breached - there is no "home run" here.

If the response is to insure that the mine barrier is never placed in the face of attack then the best means to use comes from deception. That is, using the technique that was employed in the Sinai by Egypt in the 1973 Arab-Israel war. We have already discussed this and have determined that the deception activity required would probably generate a significant backlash in the non-Soviet Warsaw Pact countries. This must be regarded as undesirable.

So, finally, we can claim that in the probable response profile we have provided a problem in which the enemy is conventionally frozen from reacting to in the short term, given their present circumstances. Of course, the Soviets will find a way, but maybe that way will create a situation of mixed motives, conflicting goals, or a retaliatory move that hurts their broader position. It is in this way that the land mine barrier systems can make a real contribution to the range of American options in future crisis and conflicts. Additionally, we can reasonably claim that these systems have a place in the "means" leg of the strategy stool.

ENDNOTES

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5. Lewis A. Dunn, The Impact of Barrier Systems Upon American Options in Future Crisis and Conflicts, Discussion Paper, Hudson Institute, June 1975, p. 9.
6. Ibid., p. 8.
7. Ibid., p. 1.
8. Peter Weber, "The Case for Fortifying West Europe," Army Magazine, February 1987, pp. 55-56.
9. Richard E. Simpkin, Antitank, Brassey's Publishers Ltd., New York, 1982, pp. 231-232.
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11. Richard E. Simpkin, Antitank, Brassey's Publishers Ltd., New York, 1982, pp. 115-120.
12. Edward B. Atkeson, "Soviet Military Theory: Relevant or Red Herring?", Parameters, Journal of the U.S. Army War College, Spring 1987, pp. 79-80.
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